Reply to Office Action of December 29, 2005

IN THE SPECIFICATION:

Page 4, line 4:

In the deflection angle detecting device according to the present invention, it is desirable

that, of optical working surfaces of the reflected-light condensing optical element, at least one

surface is configured as an irrotational a rotationally asymmetric surface.

Page 21, line 15:

In FIG. 8, since the concave mirror of the detecting reflection surface 4 is inclined, with

the X and Z axes as centers, and thus when the mirror has a rotational rotationally symmetrical

surface profile, a load due to the rotation angle is the same, it becomes easy to control the mirror

mechanically and electrically. In the second embodiment, the concave mirror is configured into

a spherical shape. Moreover, when the surface of the concave mirror is configured as

a rotational rotationally symmetrical aspherical surface, aberration can be further suppressed.

Where much account of aberration is made, it is also possible to configure the detecting

reflection surface 4 as a free-formed surface which has an irrotational rotationally symmetrical

asymmetric surface profile. In this case, it is desirable that the difference of the amounts of SAG

(the amounts of change at the Z axis) of the mirror at four corners of the effective diameter is

small.

Page 27, line 6:

The deflection angle detecting device of this embodiment is constructed so that the

detecting reflection surface 4 is configured as the reflection surface of a irrotational symmetric

rotationally asymmetric surface profile which combines a function of switching the optical path

with a function of condensing light, and the beam splitter or the polarization beam splitter in the

first to fourth Embodiments is not used.

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Page 27, line 11:

In the deflection angle detecting device of the fifth embodiment, as shown in the figures, laser light emitted from the semiconductor laser 1 which is the light source is restricted in its beam diameter by the stop 2 and is reflected by the detecting reflection surface 4. The detecting reflection surface 4 is decentered with respect to the optical axis so that reflected light does not interfere with the light source or the stop. When the optical path is switched, the reflected light reflected by the detecting reflection surface 4 undergoes at the same time the function of condensing light by the optical power of the irrotational symmetrical rotationally asymmetric surface profile configured on the detecting reflection surface 4 and is incident on the photodetector 5 to form a light spot on the light-receiving surface 6.

Page 28, line 5:

However, a decentered surface suffers from special aberration caused by decentration. For example, astigmatism or coma is produced and distortion (image distortion) assumes the shape of a trapezoid or an arc, peculiar to decentering aberration. In the deflection angle detecting device of the fifth embodiment, the detecting reflection surface 4 is decentered and placed to switch the optical path and suffers from special aberration caused by decentration. Thus, in the deflection angle detecting device of the fifth embodiment, the detecting reflection surface 4 is configured as an <u>irrotational symmetrical rotationally asymmetric</u> surface. As such, by making a difference of curvature or inclination between the upper and lower portions of the effective diameter, decentering aberration can be favorably corrected